

WHAT IS CLAIMED IS:

1. A method for encoding dynamic graphic content, said dynamic graphic content including a plurality of dynamic elements, each of which has a plurality of appearance states, the plurality of states of the plurality of elements lead to a plurality of views, said method comprising steps of:

encoding a view in which all of the plurality of dynamic elements being in a first state as a reference picture;

encoding remaining views in which at least one of the plurality of dynamic elements being in a state other than the first state as differential pictures with regards to said reference picture, to form a differential picture sequence; and

multiplexing said reference picture and said differential picture sequence together, and providing the resulting signals in video format.

2. The method of claim 1, wherein said method is implemented in the MPEG encoding scheme.

15 3. The method of claim 2, wherein said reference picture is an intra-picture, said differential pictures are predicted-pictures.

4. The method of claim 1, wherein said reference picture is cycled no less than every predetermined time period so that the bit rate of the resulting signals is reduced by a pre-selected factor.

20 5. The method of claim 1, further comprising a step of adding pictures indicating "no changes with regards to previous picture" into said differential picture sequence so as to reduce the bit-rate.

6. A method for decoding video signals resulted from the encoding method of claim 1, comprising steps of:

- 1) decoding said reference picture;
- 2) decoding the differential pictures corresponding to the state of dynamic elements that have changed with respect to said reference picture.

5 7. The method of claim 6, wherein said step (2) further comprising a step of skipping the differential pictures corresponding to the state of dynamic elements that have not changed with respect to said reference picture.

8. A method for providing dynamic graphic content, said dynamic graphic content including a plurality of dynamic elements, each of which has a plurality of appearance states, said method comprising steps of:

10 at the encoding side:

encoding a view in which all of the plurality of dynamic elements being in a first state as a reference picture;

15 encoding remaining views in which at least one of the plurality of dynamic elements being in a state other than the first state as differential pictures with regards to said reference picture, to form a differential picture sequence;

multiplexing said reference picture and said differential picture sequence together, and providing the resulting signals in video format,

at the decoding side:

decoding said reference picture;

20 decoding the differential pictures corresponding to the state of dynamic elements that have changed with respect to said reference picture, and skipping others.

9. A graphic encoding device comprising an encoder and a controller, wherein the controller controls the encoder to implement the following functions:

encoding a view in which all of the plurality of dynamic elements being in a first state as a reference picture;

5 encoding the views in which at least one of the plurality of dynamic elements being in a state other than the first state as differential pictures with regards to said reference picture, to form a differential picture sequence;

multiplexing said reference picture and said differential picture sequence together, and providing the result video signals.

10 10. A device for decoding the video signals encoded by the method of claim 1, comprising a decoder and a controller, wherein the controller controls the device to implement the following functions:

decoding said reference picture;

15 decoding the differential pictures corresponding to the state of dynamic elements that have changed with respect to said reference picture, and skipping others.

11. A broadcasting system comprising the graphic encoding device of claim 9.

12. An apparatus for offering video signals comprising the graphic encoding device of claim 9.

20 13. A video player comprising the decoding device of claim 10.

14. A user device comprising the decoding device of claim 10.